

ABSTRACT

A soft trellis slicer is provided in a high definition television (HDTV) receiver. The soft trellis slicer calculates a decision value and a confidence value corresponding to a phase angle error of a signal processed by the receiver. The receiver includes an equalizer, a phase tracking loop and a trellis decoder. The equalizer provides an equalized signal to the phase tracking loop; and the phase tracking loop calculates a phase angle error for the equalized signal. The trellis decoder calculates a decision value and a confidence value. The trellis decoder provides the decision value and the confidence value to the phase tracking loop, which calculates the reliability of the phase angle error based upon the phase angle error and the decision value and the confidence value provided by the trellis decoder. The trellis decoder calculates the decision value based upon a best path metric and calculates the confidence value based upon the best path metric and a second best path metric.